

WHAT IS CLAIMED IS:

Sup 7

1. A method for using a portable locator including a locating arrangement which is configured for locating at least one of a buried line and a boring tool, said method comprising the steps of:
 - configuring the portable locator to integrally support a marking arrangement for marking the surface of the ground, said locating arrangement being supported in one operating position, as part of the portable locator, in relation to said marking arrangement in another operating position, as another part of the portable locator;
 - with the portable locator, establishing a location on the surface of the ground relative to at least one of said buried line and said boring tool; and
 - marking the location on the surface of the ground using said marking arrangement.
2. The method of Claim 1 wherein the surface of the ground is marked using aerosol paint.
3. The method of Claim 2 including the step of configuring said marking arrangement to accept a replaceable canister of aerosol paint.
4. The method of Claim 1 including the step of configuring the marking arrangement such that an operator of the portable locator, in a generally upright position, locates using said locating arrangement and marks the surface of the ground using the marking arrangement.
5. The method of Claim 4 wherein the marking arrangement is configured for finger actuation by said operator.
6. The method of Claim 4 wherein the marking arrangement is configured for foot actuation by said operator.
7. The method of Claim 5 wherein the surface of the ground is marked using aerosol paint.
8. The method of Claim 6 wherein the surface of the ground is marked using aerosol paint.
9. The method of Claim 1 including the steps of configuring said marking arrangement for marking the surface of the ground using aerosol paint contained in a replaceable canister and providing an electrical actuation arrangement for causing emission of the aerosol paint from the canister in response to a finger actuation by an operator.
10. The method of Claim 9 wherein said step of providing the electrical actuation arrangement includes the step of using a solenoid to cause emission of the aerosol paint.
11. The method of Claim 10 wherein the solenoid includes a plunger and wherein the step of using the solenoid causes movement of the plunger which movement produces emission of the paint from the canister.
12. The method of Claim 11 including the step of connecting the plunger of the solenoid with a lever and arranging the lever proximate to the canister so that movement of the plunger causes the lever to engage the canister to emit the aerosol paint.

13. The method of Claim 10 including the steps of interfacing the solenoid with an electronics package and interfacing the electronics package with a push button switch such that the electronics package electrically actuates the solenoid responsive to the operator engaging the push button switch.

14. The method of Claim 12 further comprising the steps of housing a battery pack in the portable locator and powering the solenoid and the electronics package from the battery pack.

15. A method for using a portable locator which is configured for locating relative to a position beneath the surface of the ground, said method comprising the steps of:

configuring the portable locator to include a marking arrangement including a canister for emitting an aerosol paint to mark the surface of the ground;

interfacing an electronics package within the portable locator to (i) a push button switch located for finger actuation by an operator with the operator standing in an upright position holding the portable locator and to (ii) a solenoid having a plunger;

housing a battery pack in the portable locator for providing power to the electronics package and the solenoid such that actuation of the push button switch causes the electronics package to electrically drive the solenoid thereby moving the plunger of the solenoid; and

connecting the plunger of said solenoid with a lever arranged proximate to the canister such that movement of the plunger, as a result of the electronics package driving the solenoid, engages the lever with the canister resulting in emission of the aerosol paint.

16. The method of Claim 15 further comprising the steps of:

with the portable locator, establishing a location on the surface of the ground relative to said position; and marking the location on the surface of the ground using said marking arrangement.

17. The method of Claim 1 including the step of electronically monitoring operator actuations of the portable locator to detect a predetermined operator actuation for use in controlling the marking arrangement, to detect other operator actuations for use in controlling the locating arrangement, and to, upon detecting the predetermined operator actuation, initiate marking by the marking arrangement.

18. The method of Claim 17 wherein said electronic monitoring step includes the step of monitoring a switch for said predetermined operator actuation and said other operator actuations.

19. The method of Claim 18 wherein said electronic monitoring step includes the step of monitoring the switch for said predetermined operator actuation as a sequence of closing the switch twice in timed succession and then holding the switch closed.

20. A method for fabricating a portable device, said method comprising the steps of:

configuring a housing arrangement to define a first operating position and to define a second operating position; and

supporting a locating arrangement at the first operating position and supporting a ground marking arrangement

at the second operating position such that the locating arrangement and the ground marking arrangement in the first and second operating positions, respectively, cooperate for use by an operator in identifying a location on the surface of the ground relative to at least one of a buried line and a boring tool and in marking the location.

21. The method of Claim 20 wherein the step of configuring said housing arrangement includes the steps of forming a first housing portion and a second housing portion, positioning said locating arrangement within said first housing portion, and positioning said ground marking arrangement within said second housing portion.

22. The method of Claim 21 further including the step of hinging the first housing portion to the second housing portion for movement of the first and second housing portions between an operational configuration for use by said operator and a compact configuration for at least one of transport and storage.

23. The method of Claim 20 including the step of arranging an electronics package for monitoring operator actuations of the portable device (i) to detect a predetermined operator actuation for use in controlling the ground marking arrangement, (ii) to detect other operator actuations for use in controlling the locating arrangement and (iii) to, upon detecting the predetermined operator actuation, initiate marking by the ground marking arrangement.

24. The method of Claim 23 wherein said step of arranging the electronics package configures the electronics package to monitor a switch for said predetermined operator actuation and said other operator actuations.

25. The method of Claim 24 wherein said step of arranging the electronics package uses the electronics package to monitor the switch for said predetermined operator actuation as a sequence of closing the switch twice in timed succession and then holding the switch closed.

26. The method of Claim 23 including the step of configuring said ground marking arrangement for marking the location on the surface of the ground using aerosol paint contained in a replaceable canister.

27. The method of Claim 26 wherein said step of arranging the electronics package includes the step of using a solenoid to cause emission of the aerosol paint from the replaceable canister.

28. The method of Claim 27 wherein said solenoid includes a plunger and wherein said step of using the solenoid includes the step of causing movement of the plunger, which movement produces emission of the aerosol paint from the replaceable canister.

29. The method of Claim 27 wherein said step of using the solenoid includes the steps of:
interfacing the solenoid with said electronics package; and
configuring the electronics package such that the electronics package electrically drives the solenoid responsive to detection of said predetermined operator actuation.

30. The method of Claim 29 wherein said step of using the solenoid further includes the steps of:
housing a battery pack in the portable device; and
powering the solenoid and the electronics package from the battery pack.

31. A method for fabricating a portable device, said method comprising the steps of: configuring a housing arrangement to support a locating arrangement and a marking arrangement; and arranging an electronics package for monitoring operator actuations of the portable device (i) to detect a predetermined operator actuation for use in controlling the marking arrangement, (ii) to detect other operator actuations for use in controlling the locating arrangement, and (iii) to, upon detecting the predetermined operator actuation, initiate marking by the marking arrangement.

32. The method of Claim 31 wherein said step of arranging the electronics package arranges the electronics package to monitor the switch for said predetermined operator actuation as a sequence of closing the switch twice in timed succession and then holding the switch closed.

33. The method of Claim 31 including the steps of interfacing the marking arrangement with an electronics package; and configuring the electronics package to electrically initiate marking by the marking arrangement responsive to said predetermined operator actuation detected in said monitoring step.

34. A method for manufacturing a portable device, said method comprising the step of: providing a housing arrangement; supporting a locating arrangement in one operational orientation in said housing arrangement, said locating arrangement being configured for locating at least one of a buried line and a boring tool; and supporting a ground marking arrangement in another operational orientation such that the locating arrangement and the ground marking arrangement cooperate for use by an operator in identifying a location on the surface of the ground relative to at least one of said buried line and said boring tool and in marking the location with the locating arrangement.

35. The method of Claim 34 including the step of arranging an electronics package in said housing to monitor operator actuations of the portable device by (i) detecting a predetermined operator actuation for use in controlling the marking arrangement, (ii) detecting other operator actuations for use in controlling the locating arrangement and (iii), upon detecting the predetermined operator actuation, initiate marking by the marking arrangement.

36. The method of Claim 35 wherein said step of arranging the electronics package includes the step of configuring the electronics package to monitor a switch for said predetermined operator actuation and said other operator actuations.

37. The method of Claim 36 wherein said step of configuring the electronics package customizes the electronics package to monitor the switch for said predetermined operator actuation as a sequence including closing the switch twice in timed succession and then holding the switch closed.